

DETAILED ACTION

1. This action is in response to the amendment filed on September 19, 2008.

Claims 1-7, 9-14 and 16-26 are pending and have been considered below.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Chun M. Ng on October 29, 2008.

The claims in the application are amended as follows:

In Claims:

- (1) In claim 1, line 2; replace – **the** – between “**on**” and “**phase**” by – **a** -.
- (2) In claim 1, line 5; replace – **the** – between “**comparing**” and “**phase**” by – **a** -.
- (3) In claim 1, line 6; replace – **the** – between “**with**” and “**phase**” by – **a** -.
- (4) In claim 1, line 10; replace – **the** – between “**counting**” and “**number**” by – **a** -.
- (5) In claim 1, line 11; replace – **the** – at the beginning of line by – **a** -.

Art Unit: 2611

(6) In claim 1, line 13; replace – **the** – between “**during**” and “**duration**” by – **a** -.

(7) In claim 1, line 17; replace – **the** – between “**calculate**” and “**sum**” by -- **a** --.

(8) In claim 1, line 19; replace – **the** – between “**if**” and “**number**” by – **a** -.

(9) In claim 4; replace line 2 by - **wherein the frequency of the reference clock is N times the frequency of the target clock signal** -.

(10) In claim 5, lines 3; replace – **the** – between “**is**” and “**sum**” by – **a** -.

(11) In claim 7, line 7; replace – **the** – at the beginning of line by – **a** -.

(12) In claim 7, line 7; replace – **the** – between “**with**” and “**phase**” by – **a** -.

(13) In claim 7, line 13; replace – **the** – between “**counting**” and “**number**” by – **a** -.

(14) In claim 7, line 14; replace – **the** – between “**during**” and “**duration**” by – **a** -.

(15) In claim 7, line 17; replace – **the** – between “**during**” and “**duration**” by – **a** -.

(16) In claim 7, line 21; replace – **the** – between “**calculate**” and “**sum**” by -- **a** --.

(17) In claim 7, line 23; replace – **the** – between “**if**” and “**number**” by – **a** -.

(18) In claim 11; replace line 2 by - **wherein the frequency of the second reference clock is N times the frequency of the target** -.

Art Unit: 2611

(19) In claim 12, line 3; replace – **the** – between “**counting**” and “**cycle**” by – **a** –.

(20) In claim 12, line 15; replace – **the** – between “**to**” and “**input**” by – **an** –.

(21) In claim 14, line 2; insert – **at a phase-frequency detector** – between “**signal**” and “**by**”.

(22) In claim 14, line 3; replace – **the** – at the beginning of line by – **a** –.

(23) In claim 14, line 3; replace – **the** – between “**with**” and “**phase**” by – **a** –.

(24) In claim 14, line 4; replace – **the** – between “**counting**” and “**number**” by – **a** –.

(25) In claim 14, line 5; replace – **the** – between “**during**” and “**duration**” by – **a** –.

(26) In claim 14, line 7; replace – **the** – between “**during**” and “**duration**” by – **a** –.

(27) In claim 14, line 11; replace – **the** – between “**calculating**” and “**sum**” by – **a** –.

(28) In claim 14, line 12; replace – **the** – between “**if**” and “**number**” by – **a** –.

(29) In claim 18; replace lines 1-2 by – **The method of claim 14, wherein the frequency of the second reference clock is N times the frequency of the target clock signal and** –.

(30) In claim 19, line 2; replace – **the** – between “**counting**” and “**cycle**” by – **a** –.

(31) In claim 19, line 9; replace – **the** – between “**to**” and “**input**” by – **an** –.

Art Unit: 2611

(32) In claim 21, line 4; replace – **the** – between “**comparing**” and “**phase**” by – **a** -.

(33) In claim 21, line 4; replace – **the** – between “**with**” and “**phase**” by – **a** -.

(34) In claim 21, line 6; replace – **the** – between “**counting**” and “**number**” by – **a** -.

(35) In claim 21, line 7; replace – **the** – between “**during**” and “**duration**” by – **a** -.

(36) In claim 21, line 10; replace – **the** – between “**during**” and “**duration**” by – **a** -.

(37) In claim 21, line 14; replace – **the** – between “**calculating**” and “**sum**” by – **a** -.

(38) In claim 21, line 15; replace – **the** – between “**if**” and “**number**” by – **a** -.

(39) In claim 24; replace line 2 by – **frequency of the second reference clock is N times the frequency of the target clock signal and** -.

(40) In claim 25, line 2; replace – **the** – between “**counting**” and “**cycle**” by – **a** -.

(41) In claim 25, line 9; replace – **the** – between “**to**” and “**input**” by – **an** -.

Allowable Subject Matter

3. Claims 1-7, 9-14 and 16-26 are allowed.

4. The following is an examiner’s statement of reasons for allowance: The prior art of record Hsu et al discloses a phase adjusting circuit that adjust the phase based on

Art Unit: 2611

control signal depending on the phase shift value, but the prior art fails to disclose that the phase adjusting circuit adjust the phase based on a decision that is made based on, a value i.e. third value of the counter that corresponds to two different counted numbers or values during the duration of up and down control signals respectively and also based on the sum of the third counted values whether the sum in a specified range, where the first and second values are counted corresponding to up and down signal that are generated by comparing the phases of input signal and target clock signal. All these features are parts of the independent claims rendering them allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Chang (US 7,176,730) discloses a system and method to reduce glitch disturbance for phase frequency detector by counting two different values.
 - b. Omori et al. (US 2007/0242127) discloses an apparatus and method for pixel clock generation where the phase shift amount is calculated with a counter.

Art Unit: 2611

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HIRDEPAL SINGH whose telephone number is (571) 270-1688. The examiner can normally be reached on Mon-Fri (Alternate Friday Off) 8:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. S./

Examiner, Art Unit 2611

/Shuwang Liu/

Supervisory Patent Examiner, Art Unit 2611